

SEQUENCE LISTING

<110> Friddle, Carl Johan
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Turner, C. Alexander Jr.

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Cys Gln Pro Gly Phe Ser Gly Gln Arg Cys Glu Thr Glu Gln Ser Thr
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Gly Phe Asn Leu Asp Phe Glu Val Ser Gly Ile Tyr Gly Tyr Val Met
1425 1430 1435 1440
Leu Asp Gly Met Leu Pro Ser Leu His Ala Leu Thr Cys Thr Phe Trp
1445 1450 1455
Met Lys Ser Ser Asp Asp Met Asn Tyr Gly Thr Pro Ile Ser Tyr Ala
1460 1465 1470
Val Asp Asn Gly Ser Asp Asn Thr Leu Leu Leu Thr Asp Tyr Asn Gly
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Asn Gly Ile Trp Lys Val Tyr Ile Asp Gly Lys Leu Ser Asp Gly Gly
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 Ala Gly Leu Ser Val Gly Leu Pro Ile Pro Gly Gly Gly Ala Leu Val
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 Leu Gly Gln Glu Gln Asp Lys Lys Gly Glu Gly Phe Ser Pro Ala Glu
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 Ser Phe Val Gly Ser Ile Ser Gln Leu Asn Leu Trp Asp Tyr Val Leu
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 Ser Pro Gln Gln Val Lys Ser Leu Ala Thr Ser Cys Pro Glu Glu Leu
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 Ser Lys Gly Asn Val Leu Ala Trp Pro Asp Phe Leu Ser Gly Ile Val
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 Lys Pro Gly Ser Lys Val Asn Leu Phe Cys Asp Pro Gly Phe Gln Leu
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 Val Gly Asn Pro Val Gln Tyr Cys Leu Asn Gln Gly Gln Trp Thr Gln
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 Pro Leu Pro His Cys Glu Arg Ile Ser Cys Gly Val Pro Pro Pro Leu
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 Thr Tyr Gln Cys Asn Asn Gly Tyr Tyr Leu Leu Gly Asp Ser Arg Met
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 Phe Cys Thr Asp Asn Gly Ser Trp Asn Gly Val Ser Pro Ser Cys Leu
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 Asp Val Asp Glu Cys Ala Val Gly Ser Asp Cys Ser Glu His Ala Ser
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 Cys Leu Asn Val Asp Gly Ser Tyr Ile Cys Ser Cys Val Pro Pro Tyr
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 Cys Asn Lys Gly Tyr Thr Leu Ala Gly Asp Lys Glu Ser Ser Cys Leu
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 1890 1895 1900
 Cys Ser Ser Pro Glu Asn Ile Asn Asn Gly Lys Tyr Ile Leu Ser Gly
 1905 1910 1915 1920
 Leu Thr Tyr Leu Ser Thr Ala Ser Tyr Ser Cys Asp Thr Gly Tyr Ser
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 1940 1945 1950
 Arg Ala Pro Pro Ala Cys His Leu Val Phe Cys Gly Glu Pro Pro Ala
 1955 1960 1965

Ile Lys Asp Ala Val Ile Thr Gly Asn Asn Phe Thr Phe Arg Asn Thr
1970 1975 1980
Val Thr Tyr Thr Cys Lys Glu Gly Tyr Thr Leu Ala Gly Leu Asp Thr
1985 1990 1995 2000
Ile Glu Cys Leu Ala Asp Gly Lys Trp Ser Arg Ser Asp Gln Gln Cys
2005 2010 2015
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Glu Thr Ala His Arg Leu Phe Gly Asp Ile Ala Phe Tyr Tyr Cys Ser
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Gly Lys Trp Val Pro Pro Glu Gly Gln Asp Met Pro Arg Cys Ile Ala
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Met Glu Gly Phe Val Leu Asn Thr Ser Ala Lys Ile Glu Cys Met Arg
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2180 2185 2190
Ser Ser Pro Ile Pro Thr Cys His Pro Val Ser Cys Gly Glu Pro Pro
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Lys Val Glu Asn Gly Phe Leu Glu His Thr Thr Gly Arg Ile Phe Glu
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Pro Val Phe Val Cys Gln Ala Asn Arg His Trp His Ser Glu Ser Pro
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Leu Met Cys Val Pro Leu Asp Cys Gly Lys Pro Pro Pro Ile Gln Asn
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Gly Phe Met Lys Gly Glu Asn Phe Glu Val Gly Ser Lys Val Gln Phe
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Phe Cys Asn Glu Gly Tyr Glu Leu Val Gly Asp Ser Ser Trp Thr Cys
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Gln Lys Ser Gly Lys Trp Asn Lys Lys Ser Asn Pro Lys Cys Met Pro
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His Val Leu Gln Gly Pro Ser Val Leu Lys Cys Leu Pro Ser Gln Gln
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Trp Asn Asp Ser Phe Pro Val Cys Lys Ile Val Leu Cys Thr Pro Pro
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Pro Leu Ile Ser Phe Gly Val Pro Ile Pro Ser Ser Ala Leu His Phe
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Gly Glu Asn Gly His Trp Leu Gly Gly Lys Pro Thr Cys Lys Ala Ile	2485	2490	2495
Glu Cys Leu Lys Pro Lys Glu Ile Leu Asn Gly Lys Phe Ser Tyr Thr	2500	2505	2510
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Arg Leu Glu Gly Pro Ser Ala Leu Thr Cys Leu Glu Thr Gly Asp Trp	2530	2535	2540
Asp Val Asp Ala Pro Ser Cys Asn Ala Ile His Cys Asp Ser Pro Gln	2545	2550	2555
Pro Ile Glu Asn Gly Phe Val Glu Gly Ala Asp Tyr Ser Tyr Gly Ala	2565	2570	2575
Ile Ile Ile Tyr Ser Cys Phe Pro Gly Phe Gln Val Ala Gly His Ala	2580	2585	2590
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Ser Asn Phe Leu Tyr Gly Thr Met Val Ser Tyr Thr Cys Asn Pro Gly	2675	2680	2685
Tyr Glu Leu Leu Gly Asn Pro Val Leu Ile Cys Gln Glu Asp Gly Thr	2690	2695	2700
Trp Asn Gly Ser Ala Pro Ser Cys Ile Ser Ile Glu Cys Asp Leu Pro	2705	2710	2715
Thr Ala Pro Glu Asn Gly Phe Leu Arg Phe Thr Glu Thr Ser Met Gly	2725	2730	2735
Ser Ala Val Gln Tyr Ser Cys Lys Pro Gly His Ile Leu Ala Gly Ser	2740	2745	2750
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Ser Ile Lys Gly Ser Asn Tyr Thr Tyr Leu Ser Thr Leu Tyr Tyr Glu	2785	2790	2795
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Cys Ser Ser Pro Pro Val Ser Ala Asn Gly Gln Val Arg Gly Asp Glu	2835	2840	2845
Tyr Thr Phe Gln Lys Glu Ile Glu Tyr Thr Cys Asn Glu Gly Phe Leu	2850	2855	2860

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Leu	Thr	Cys	Gln	Ser	Asp	Gly	Asn	Trp	Asp	Ala	Glu	Ile	Pro	Leu	Cys	2930	2935	2940	
Lys	Pro	Val	Asn	Cys	Gly	Pro	Pro	Glu	Asp	Leu	Ala	His	Gly	Phe	Pro	2945	2950	2955	2960
Asn	Gly	Phe	Ser	Phe	Ile	His	Gly	Gly	His	Ile	Gln	Tyr	Gln	Cys	Phe	2965	2970	2975	
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Cys	Gln	Glu	Asn	Arg	Gln	Trp	Ser	Gly	Gly	Val	Ala	Ile	Cys	Lys	Glu	3285	3290	3295	
Thr	Arg	Cys	Glu	Thr	Pro	Leu	Glu	Phe	Leu	Asn	Gly	Lys	Ala	Asp	Ile	3300	3305	3310	

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Ser Lys Asn Tyr Val Val Pro Arg Val Asp Tyr Ile Ser Thr Arg Arg
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Ser Tyr Arg Gly Gly Gly Thr Tyr Thr Lys Gly Ala Phe Gln Gln Ala
165          170          175
Ala Gln Ile Leu Leu His Ala Arg Glu Asn Ser Thr Lys Val Val Phe
180          185          190

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 Ala Ser Leu Arg Asp Ser Gly Val Glu Ile Phe Thr Phe Gly Ile Trp
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 Asp Met Val His Cys Ser Tyr Leu Cys Asp Glu Gly Lys Asp Cys Cys
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